

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of:)	
)	
Expanding Flexible Use of the 3.7 to 4.2 GHz Band)	GN Docket No. 18-122
)	
Wireless Telecommunications Bureau Seeks Comment On Preliminary Cost Category Schedule For 3.7-4.2 GHz Band Relocation Expenses)	DA 20-457
)	
)	

COMMENTS OF AT&T

AT&T Services, Inc., on behalf of the subsidiaries and affiliates of AT&T Inc. (collectively, “AT&T”), hereby submits the following comments in response to public notice DA 20-457 in the above-captioned proceeding.¹ The *Public Notice* solicits comment on a preliminary schedule of categories and costs prepared by RKF Engineering Solutions, LLC for incumbent relocation in the 3.7 GHz Service band.² The *Preliminary Cost Category Schedule*, and the record developed in response to the *Public Notice*, will form the basis for the final cost category schedule required to be adopted by the Wireless Telecommunications Bureau (the “Bureau”) to guide cost-compensation for the 3.7 GHz Service migration.³ As discussed below, AT&T is providing some overarching comments regarding the proposed schedule as well as some more targeted comments on specific tables in the *Preliminary Cost Category Schedule*.

¹ Wireless Telecommunications Bureau Seeks Comment on Preliminary Cost Category Schedule for 3.7-4.2 GHz Band Relocation Expenses, *Public Notice*, GN Docket No. 18-122, DA 20-457 (rel. Apr. 27, 2020) (“*Public Notice*”).

² See *Public Notice* at Attachment, 3.7 GHz Transition Preliminary Cost Category Schedule of Potential Expenses and Estimated Costs (“*Preliminary Cost Category Schedule*”).

³ Expanding Flexible Use of the 3.7 to 4.2 GHz Band, *Report and Order and Order of Proposed Modification*, GN Docket No. 18-122, FCC 20-22 at ¶ 262 (rel. Mar. 3, 2020) (“*Order*”).

First, the cost category schedule is intended to be used by the Relocation Payment Clearinghouse (“Relocation Clearinghouse” as a safe harbor for migration and filtering cost compensation for the 3.7 GHz Service transition. As the Federal Communications Commission (“Commission” or “FCC”) stated in the *Order* and in the rules adopted therein, “[r]eimbursement submissions that fall within the estimated range of costs in the cost category schedule issued by the Bureau shall be presumed reasonable.”⁴ Accordingly, although AT&T foresees that there will be exceptional circumstances where costs for a particular category will exceed the ranges set forth in the cost category schedule, AT&T’s comments are generally directed at costs that are applicable to typical situations, or at least within one or more standard deviations of “typical.” While an effort should be made to bring as many variations within the cost category schedule as possible, thus limiting the need for discretion on the part of the Relocation Clearinghouse, even with dividing cost categories into very detailed specifics and subcategories, there will always be situations that arise where actual costs exceed anticipated costs. The mere fact that costs exceed the “safe harbor” of the final cost category schedule, however, should not give rise to an inference that the requested reimbursements are unreasonable, but rather simply trigger a requirement for some justification by the proponent and routine review by the Relocation Clearinghouse.

Second, because AT&T anticipates that significant costs may arise with respect to Technology Upgrades, Section V of the *Preliminary Cost Category Schedule* warrants particular scrutiny. AT&T recognizes both that not all satellite customers will require technology upgrades in order to migrate existing services above 4000 MHz and that satellite operators are best positioned to determine, on a customer-by-customer basis, where technology upgrades are

⁴ 47 C.F.R. §24.1416(a); *Order* at ¶ 262.

necessary to ensure that capacity needs are met post-migration. That said, however, if a satellite customer is identified as requiring one or more technology upgrades—whether implementation of compression or alterations to the modulation scheme for its transmissions—that customer must have a role in the decisions about what technology upgrades are applied and how those technology upgrades are implemented. The *Preliminary Cost Category Schedule* takes the view, however, that for technology upgrades “the reimbursement for and distribution of this equipment is anticipated to flow through *the satellite operators* and is not part of earth station costs,”⁵ which seems to limit the role of the C-band customers and end users. In such regards, the Commission clarified in the *Order* that “comparability for video distribution services requires that the video quality of the end-to-end, programmer-to-viewer chain is at least as good as it is today.”⁶ Standing alone, the fact that comparability is assessed on an end-to-end basis means that content providers must not only be consulted, but also be an integral part of the implementation of technology upgrades.⁷ In addition, the Commission should anticipate that content distributors and some larger MVPDs may self-migrate due to the complexity of their facilities, and therefore may be required to implement technology upgrades that are not “flow[ed] through” the satellite operators. The final cost category schedule should acknowledge that technology upgrades are applicable only for customers designated by the satellite operators, but beyond that should be handled the same as any other migration costs.⁸

⁵ *Preliminary Cost Category Schedule* at 20.

⁶ *Order* at ¶ 184 n.518.

⁷ For example, a programmer’s choice of encoding hardware at the uplink facility may affect the range of equipment that is compatible at the MVPDs’ downlinks due to configuration, hardware and manufacturer compatibility issues.

⁸ In such regards, the customer-specific application of technology upgrades also has an impact on MVPDs that accept lump sum payments. Although the Commission has recognized that

AT&T also believes that Section V on Technology Upgrades would benefit from greater specificity. The cost of technology upgrades will likely be one of the most significant costs relating to the transition of programming networks and will involve many complex considerations. However, the *Preliminary Cost Category Schedule* does not provide enough specificity to assess whether and how these complexities will be taken into account. The only subcategorization of technology upgrades in the *Preliminary Cost Category Schedule* is the division into uplink and downlink components, and in both cases is specified on a “per transponder” basis. Many earth station owners, however, will need multiple receivers for each programmer that sends them content—potentially as many receivers as the number of transponders that programmer uses. Moreover, programming networks that share a transponder will generally require different decoders and possibly multiple receivers. The cost of downlink technology upgrades also may vary depending on the nature of each distributor’s cable plant and other facilities. As a result, costs in Section V of the *Preliminary Cost Category Schedule* should be further broken down into components, separating out soft costs that are technology upgrade specific, as well as breaking the categories into different cost schedules for different types of upgrades—different compression formats, modulation changes, *etc.*

Third, the *Preliminary Cost Category Schedule* should explicitly break out costs associated with “occasional use” (“OU”) earth stations. Although the *Preliminary Cost*

different classes of facilities exist and “average” costs will need to be developed—“e.g., MVPDs, non-MVPDs, gateway sites”—technology upgrades will also need to be factored into the process. *Id.* at ¶ 203. The Bureau could, for example, develop standalone averages for classes of technology upgrades or develop averages for subclasses of MVPDs with and without particular technology upgrades. Either of these options would fairly address technology upgrades while remaining consistent with the Commission’s admonition that “by accepting the lump sum, the incumbent takes on the risk that the lump sum will be insufficient to cover all its relocation costs.” *Id.*

Category Schedule has a table for “Temporary Fixed” earth stations, the migration costs for, and transition issues associated with, OU facilities seem sufficiently distinct from other classes of Temporary Fixed facilities that those OU facilities warrant separate consideration.⁹ AT&T notes, for example, that the only dish size provided in the Temporary Fixed table is 4.5m, which is not the only size used for OU (AT&T more commonly uses 5m and 2.4m dishes). In addition, AT&T previously suggested that it would be appropriate to potentially apply more sophisticated filtering to OU earth stations, even if more costly, to enhance the ability to continue OU usage going forward.¹⁰

Fourth, the *Preliminary Cost Category Schedule* appears to recognize that new antenna replacement may be called for in certain circumstances, but it is not clear that wholesale replacement is addressed consistent with the *Order*. The *Order* acknowledges that the Commission “expect[s] that some incumbents will not be able to replace older, legacy equipment with equipment that is exactly comparable in terms of functionality and cost because of advances in technology and because manufacturers often cease supporting older equipment,” and affirms that “[i]ncumbents may receive the reasonable replacement cost for such newer equipment to the extent it is needed to carry out the transition.”¹¹ For most systems, the costs of replacing an entire installation are detailed in Table III-D-1. However, Table III-D-1 provides a “Gateway

⁹ There is the possibility that OU stations will be required to implement Technology Upgrades, which would presumably be addressed in Table V. Noting the differences between OU and other more conventional facilities, however, separate Technology Upgrade provisions may be warranted in Table V.

¹⁰ See, e.g., Letter from Michael P. Goggin, AT&T, to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket 18-122 at 10 (dated Jan. 30, 2020).

¹¹ *Order* at ¶ 194 (also noting the Commission “intend[s] to allow reimbursement for the cost of that equipment and recognize[s] that this equipment necessarily may include improved functionality beyond what is necessary to clear the band”).

System Relocation Cost” of \$2.1M-\$4.5M, which seems inconsistent with Table III-B-5, which also appears to provide total system replacement costs for 7.3 meter Limited Motion Antenna (“LMA”), 13 meter LMA, 13 meter Extended Performance Antenna (“EPA”), and 13 meter Full Performance Antenna (“FPA”) Gateway equipment. Because wholesale replacement is intended to be compensable only in certain instances, it is unclear why Table III-B-5 only provides wholesale replacement costs and not modification costs, and, indeed, why those costs differ from the line item provided in Table III-D-1.¹²

Fifth, given the present state of the *Preliminary Cost Category Schedule*, AT&T is concerned that the schedule may not yet be suitable for finalization, and suggests that finalization should be deferred until after the Transition Plans have been filed, reviewed, and approved. After Transition Plans have been finalized, stakeholders will have a much better understanding of the migration steps that are planned and, in particular, the technology upgrades that will be needed (and by which customers). Indeed, it would be appropriate to permit additional public comment on the cost category schedule after Transition Plans have been filed. Having a more accurate and more comprehensive cost schedule will benefit all parties, because having a broader range of compensation issues directly and appropriately addressed within the schedule will mean less review by the Relocation Clearinghouse will be needed, fewer controversies will arise, faster reimbursements will be paid, and the migration will proceed more smoothly. AT&T accordingly

¹² Not only does this ambiguity give rise to questions about which table controls for purposes of Gateway facility replacement costs, Section III.B.4 of the *Preliminary Cost Category Schedule* also indicates that Table III-B-5 is not intended to address “Telemetry, Tracking, and Control (TT&C) consolidation costs[, which] are covered in Section C,” *Preliminary Cost Category Schedule* at 11, but appears to cite TT&C uses relative to 13m LMAs, 13m EPAs, and 13m FPAs, causing confusion about whether the costs in Table III-C-1 (for “Section C”) controls over Table III-B-5.

urges the Bureau to defer adopting the cost category schedule until after Transition Plans have been finalized.

As a final matter, AT&T's review of the specific cost tables in the Preliminary Cost Category Schedule did raise a few questions and concerns. Specifically:

- The costs in Table III-A-1 appear reasonable for a single antenna using a single polarization. There are a number of antennas that support multiple polarizations, however, which raises the concern that the ranges would be too low if the estimates are intended to reflect "per antenna" costs as currently stated.
- It is unclear what is meant by "dual illumination of transponder" in Table III-A-2. Specifically, it is not evident whether that term is intended to encompass items like receivers and cabling from the perspective of the C-band customer/programmer or the C-band user/affiliate. In addition, some of the cost categories involve labor costs, including labor at remote facilities, so the tables should reflect travel and other additional costs associated with those remote facilities. Finally, the cost category schedule should define what is meant by a "seeded" antenna.
- Similar to Table III-A-1, Table III-A-3 appears to estimate costs for a "Solid State Power Amplifier" based on a single antenna using a single polarization,¹³ without including any provision for back-up. Because facilities typically have both a primary transmitter and a back-up for each polarization, the cost per antenna could be easily exceed the upper limit of the range.
- In Table III-B-1, the cost estimates appear reasonable for the size dishes that are included, which range from 3.7 meters to 4.5 meters. However, AT&T's major affiliates commonly use much larger dishes, including 7 meter to 13 meter dishes, which could result in considerably higher costs. Table III-B-1 should, accordingly, be modified to include additional, larger standard antenna sizes.
- Table III-B-2 addresses the migration of "Near Full-arc Multibeam Antenna Equipment," which includes the torus antennas used by larger MVPDs, including DirecTV. Although most of the cost items appear reasonable, the "C-band Dual Polarity Feed Assembly (per feed)" cost is stated as \$1,500-\$2,500, which appears to underestimate costs by almost an order of magnitude. AT&T suggests the appropriate range should be up to \$20,000 for that element. In addition, the table ranges differ for "small" and "large" antennas, but

¹³ Table III-A-3 does include, with the SSPA reference, a note stating "2 polarizations required," which is somewhat ambiguous as to whether the cost figure proposed is intended to cover a single polarization, or both polarizations. AT&T believes the costs are a reasonable range for a single polarization, but the line item should be clarified.

those terms are not defined. If the cost category schedule is to be applied to reduce ambiguity in the reimbursement process, those size categories should be enumerated.

In many of these instances, the question of whether the provided cost ranges are reasonable is dependent upon resolving the outstanding issues.

The *Preliminary Cost Category Schedule* is a respectable start towards a definitive cost category template, but, in AT&T's view, it is very preliminary. Although AT&T recognizes that the cost category schedule is not intended to address every possible scenario that could arise under the 3.7 GHz transition, there are broad categories of migration issues, including OU and technology upgrades, where configurations can be readily foreseen and should be addressed at the outset. As discussed above, refraining from finalizing the cost category schedule until Transition Plans are better defined would likely benefit the transition process overall.

Respectfully Submitted,

AT&T, INC.

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